

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. to 2. (canceled)

3. (previously presented) A touch sensor, comprising:

a substrate having a resistive touch region;

a set of electrodes electrically coupled to the touch region; and

a plurality of band segments framing the touch region and having an intermediate resistivity between the resistivity of the electrodes and the resistivity of the touch region, wherein the electrodes are disposed between the band segments, and at least one of the band segments has a linear resistance that varies along its length and has a width that varies along its length, each band segment being continuous or quasi-continuous along at least a portion of its length.

4. (currently amended) A touch sensor, comprising:

a substrate having a resistive touch region;

a set of electrodes electrically coupled to the touch region; and

a plurality of band segments framing the touch region and having an intermediate resistivity between the resistivity of the electrodes and the resistivity of the touch region, wherein the electrodes are disposed between the band segments, and at least one of the band segments has a linear resistance that varies along its length and has a thickness ~~width~~ that varies along its length, each band segment being continuous or quasi-continuous along at least a portion of its length.

5. (previously presented) A touch sensor, comprising:

a substrate having a resistive touch region;

a set of electrodes electrically coupled to the touch region; and

a plurality of band segments framing the touch region and having an intermediate resistivity between the resistivity of the electrodes and the resistivity of the touch region, wherein the electrodes are disposed between the band segments, and at least one of the band segments has a linear resistance that varies along its length and comprises an array of electrically conductive elements, the conductive elements having a spacing or size that varies along the length of the at least one band segment, each band segment being continuous or quasi-continuous along at least a portion of its length.

6. to 9. (canceled)

10. (previously presented) A dynamic touch sensor system, comprising:

a touch sensor that generates touch information in response to a touch and generates measurable information indicative of a given electrical characteristic in the touch sensor, the touch sensor comprising a substrate having a resistive touch region, a set of electrodes electrically coupled to the touch region, and a band framing the touch region and having a resistivity intermediate the resistivity of the electrodes and the resistivity of the touch region, wherein the band has a substantially non-uniform linear resistance, the band being continuous or quasi-continuous along at least a portion of its length, and having a width that varies along its length; and

control electronics coupled to the electrodes for receiving the touch information and measurable information from the touch sensor, wherein the control electronics uses an algorithm to determine the coordinates of the location of the touch in the touch region based on the touch information, and modifies the algorithm based on the measurable information.

11. (previously presented) A dynamic touch sensor system, comprising:

a touch sensor that generates touch information in response to a touch and generates measurable information indicative of a given electrical characteristic in the touch sensor, the touch sensor comprising a substrate having a resistive touch region, a set of electrodes electrically coupled to the touch region, and a band framing the touch region and having a resistivity intermediate the resistivity of the electrodes and the resistivity of the touch region,

wherein the band has a substantially non-uniform linear resistance, the band being continuous or quasi-continuous along at least a portion of its length and having a thickness that varies along its length; and

control electronics coupled to the electrodes for receiving the touch information and measurable information from the touch sensor, wherein the control electronics uses an algorithm to determine the coordinates of the location of the touch in the touch region based on the touch information, and modifies the algorithm based on the measurable information.

12. (previously presented) A dynamic touch sensor system, comprising:

a touch sensor that generates touch information in response to a touch and generates measurable information indicative of a given electrical characteristic in the touch sensor, the touch sensor comprising a substrate having a resistive touch region, a set of electrodes electrically coupled to the touch region, and a band framing the touch region and having a resistivity intermediate the resistivity of the electrodes and the resistivity of the touch region, wherein the band has a substantially non-uniform linear resistance, the band being continuous or quasi-continuous along at least a portion of its length and comprising an array of electrically conductive elements disposed on the substrate, the conductive elements having a spacing or size that varies along the length of the band; and

control electronics coupled to the electrodes for receiving the touch information and measurable information from the touch sensor, wherein the control electronics uses an algorithm to determine the coordinates of the location of the touch in the touch region based on the touch information, and modifies the algorithm based on the measurable information.

13. to 38 (canceled)

39. (previously presented) A touch sensor, comprising:

a substrate having a resistive touch region;

a set of electrodes electrically coupled to the touch region; and

a plurality of band segments framing the touch region and having a resistivity intermediate between the resistivity of the electrodes and the resistivity of the touch region,

wherein the electrodes are disposed between the band segments, and at least one band segment comprises a continuous resistive background material and an array of electrically conductive elements disposed substantially perpendicularly along at least a lengthwise band portion of the at least one band segment in contact with the background material, the electrically conductive elements having a resistivity that is lower than the resistivity of the background material, the lengthwise band portion being quasi-continuous along its length.

40. (previously presented) The touch sensor of claim 39, wherein the resistive touch region is formed from the background material.

41. (previously presented) The touch sensor of claim 39, wherein the background material has a resistivity different from the resistivity of the touch region.

42. (previously presented) The touch sensor of claim 39, wherein the electrically conductive elements extend perpendicularly relative to the lengthwise band portion.

43. (previously presented) The touch sensor of claim 39, wherein the electrically conductive elements are generally arranged parallel to each other.

44. (previously presented) The touch sensor of claim 39, wherein the electrically conductive elements are composed of linear lines.

45. (previously presented) The touch sensor of claim 39, wherein the background material comprises a series of resistive segments alternately disposed between the conductive elements.

46. (previously presented) The touch sensor of claim 45, wherein each electrically conductive element has a fractional width defined by the dimension of the electrically conductive element along the lengthwise band portion over the sum of the dimension of the corresponding resistive segment along the lengthwise band portion and the dimension of the electrically conductive element along the lengthwise band portion.

47. (previously presented) The touch sensor of claim 46, wherein the fractional width is less than 0.9.
48. (previously presented) The touch sensor of claim 46, wherein the fractional width is between 0.2 and 0.8.
49. (previously presented) The touch sensor of claim 46, wherein the fractional width amongst the electrically conductive elements varies.
50. (previously presented) The touch sensor of claim 46, wherein the fractional width amongst the electrically conductive elements is uniform.
51. (previously presented) The touch sensor of claim 45, wherein the dimension of each of the resistive segments along the lengthwise band portion is less than 1 percent of the length of the at least one band segment.
52. (previously presented) The touch sensor of claim 39, wherein the continuous resistive background material and the array of electrically conductive elements are disposed along the entire length of the at least one band segment.
53. (previously presented) The touch sensor of claim 39, wherein the at least one band segment comprises the plurality of band segments.
54. to 63. (canceled)